

## BEngTech (Electrical)

Enrolment 2025 (for students who commenced  
 in 2023 or earlier)

STUDENT ID: ..... NAME: ..... SIGNED: .....

Once you have made your selections please go to My AUT to complete your enrolment.

- FY = Full Year, S1 = Semester 1, S2 = Semester 2
- Prerequisite courses are shown in the brackets after each course; please check these to ensure you have completed all necessary prerequisite courses.
- Final approval for enrolment will be made by the Programme Leader or School Registrar. **Shaded courses are compulsory core courses.** For enrolment queries or issues, please email your Academic Administrator (e: [engineer@aut.ac.nz](mailto:engineer@aut.ac.nz)).

| YEAR 1    |                                                |    |           |                                                 |    |
|-----------|------------------------------------------------|----|-----------|-------------------------------------------------|----|
| ENGE401   | Introductory Engineering Mathematics           | S1 | **ENSE503 | Programming Concepts and Techniques             | S2 |
| ENGE500   | Introduction to Sustainable Engineering Design | S1 | ENEL500   | Analogue Devices & Systems (ENEL501 or ENGE504) | S2 |
| **ENEL501 | Electrical Engineering Fundamentals            | S1 | **ENEL505 | Networks and Internet                           | S2 |
| ENEL503   | Digital Devices and Systems                    | S1 | ENGE501   | Engineering Mathematics 1 (ENGE401)             | S2 |

| YEAR 2    |                                              |    |           |                                                                                                                         |    |
|-----------|----------------------------------------------|----|-----------|-------------------------------------------------------------------------------------------------------------------------|----|
| **ENEL507 | Electrical Machines (ENEL501 or ENGE504)     | S1 | ENEL602   | Electronics Project (ENEL500 & ENEL501 & ENEL503)                                                                       | S2 |
| ENEL510   | Industrial Measurement and Control (ENEL501) | S1 | **ENEL508 | Introduction to Illumination Engineering (ENEL501) <i>(not offered in 2025. Students can enrol in ENGE603 instead)*</i> | S2 |
| **ENEL506 | Elements of Power Engineering (ENEL501)      | S1 | ENGE600   | Engineering Management I                                                                                                | S2 |
|           | Major Option Course 1                        | S1 | **ENEL614 | Electrical Building Services (ENEL507)                                                                                  | S2 |

\*Students can also take a similar course at another institution and have it cross credited eg: Unitec [Illumination Engineering](#) | Unitec

| YEAR 3  |                                                                                   |       |         |                                                         |       |
|---------|-----------------------------------------------------------------------------------|-------|---------|---------------------------------------------------------|-------|
| ENGE777 | Engineering Work Experience                                                       |       |         |                                                         | S1/S2 |
| ENEL791 | Specialisation Project (Part A) (ENBU607, ENBU611, ENBU612; Restriction: ENBU795) | S1/S2 | ENEL792 | Specialisation Project (Part B)                         | S1/S2 |
| ENEL710 | Distributed and Alternative Generation (ENEL507)                                  | S1    | ENGE701 | Engineering Management II (ENGE600)                     | S2    |
| ENEL608 | Introduction to Microcontrollers (ENSE503)                                        | S1    | ENEL703 | Power Systems Engineering (ENEL500 & ENEL506 & ENEL501) | S2    |
|         | Major Option Course 2                                                             |       |         | Major Option Course 3                                   |       |

| ELECTRICAL MAJOR OPTION COURSE: |                                             |    |          |                                                             |    |
|---------------------------------|---------------------------------------------|----|----------|-------------------------------------------------------------|----|
| **ENEL511                       | PLC Application A (ENEL503)                 | -  | ENEL615  | Illumination Engineering (ENEL508)                          | S2 |
| ENEL701                         | Power Electronic Systems (ENEL613, ENGE601) | S1 | ENEL610  | Industrial Circuit Model (ENEL501, ENGE501)                 | S2 |
| **ENEL613                       | Power Electronics (ENEL506)                 | -  | *ENEL620 | PLC Applications (ENEL503)<br>* requires variation of study | S2 |

|           |                                                                                 |       |  |          |                                                                                                                   |    |
|-----------|---------------------------------------------------------------------------------|-------|--|----------|-------------------------------------------------------------------------------------------------------------------|----|
| **ENEL618 | PLC Application B (ENEL511)                                                     | -     |  | *ENGE603 | Renewable Energy Generation, Storage and Utilisation (ENEL501 or ENGE504)<br><i>* requires variation of study</i> | S2 |
| ENEL702   | Instrumentation and Control Systems (ENEL510, ENGE601)                          | S1    |  | *ENEL606 | Analogue and Digital Systems (ENGE504 (or ENEL501) & ENEL500 & ENEL503)<br><i>* requires variation of study</i>   | S2 |
| ENGE601   | Engineering Mathematics II (ENGE501)                                            | S1/S2 |  |          |                                                                                                                   |    |
| *ENEL621  | Elements of Power Engineering (ENEL501)<br><i>* requires variation of study</i> | S1    |  |          |                                                                                                                   |    |

*\*requires variation of study*

**\*\*Courses not offered in 2025**

### Note:

1. Course level is the first digit of the numerical part of the alphanumeric code.
2. Students must complete all year 1 courses to enrol in any of Year 3 courses.
3. Students must complete all compulsory courses (shaded in grey or blue) and can take elective courses either from their major (unshaded) or outside their major (up to 30 points only).
4. Students must have at least 150 points at level 6 or higher. Of these at least 75 points must be at Level 7 or higher
5. Enrolment in Specialisation Project subject to the satisfactory completion of 240 points and completion of all year 1 courses.
6. Completion of ENGE777 is compulsory to graduate and no credits will be offered for this course:
  - a. Work Experience to commence at 240 points
  - b. A student must complete a minimum of 600 hours of planned supervised work experience approved by the programme director within one year of completing the coursework requirements to be eligible for this qualification.
7. Students who plan on studying at postgraduate level or transfer to the Bachelor of Engineering (Hons) programme should take ENGE601 Engineering Mathematics II.
8. Course offerings are subject to change each year.